

09/933,864
Page 3

AMENDMENTS TO THE CLAIMS

- A1
1. (Currently Amended) An imageable composition comprising:
 - an acid curable composition;
 - an acid generator; and
 - a ~~strong~~ sulfonic acid represented by the formula $R-SO_3H$, wherein R is a substituted or unsubstituted hydrocarbyl of 1 to 22 carbon atoms, or a substituted or unsubstituted aryl of 6 to 22 carbon atoms.
 2. (Currently Amended) The composition of claim 1, wherein said acid curable composition comprises:
 - a crosslinkable binder; and
 - a crosslinking agent for said binder.
 3. (Original) The composition of claim 2, wherein said binder comprises a polymer having at least two reactive groups each independently selected from the group consisting of: hydroxy, carboxylic acid, amine, carbamate, amide, sulfonamide and imide.
 4. (Currently amended) The composition of claim ~~3~~ 2, wherein said ~~reactive group in said binder comprises a polymer is a~~ having at least two reactive hydroxy group groups.
 5. (Currently amended) The composition of claim ~~4~~ 2, wherein said ~~polymer is~~ binder comprises a polymer selected from the group consisting of: a polyol, a polyether polyol, a novolak resin, a resole resin, a hydroxyfunctional acrylic resin, a hydroxyfunctional polyester resin and combination thereof.
 6. (Currently amended) The composition of claim 2, wherein said binder ~~is~~ comprises a novolak resin.
 7. (Currently amended) The composition of claim 2, ~~wherein said comprising a crosslinking agent is~~ selected from the group consisting of: a resole resin, an amino resin, an amido resin, an epoxy compound having at least two epoxide groups and a combination thereof.
- A2

09/933,864
Page 4

a2 8. (Currently amended) The composition of claim-7 2, wherein said crosslinking agent is comprises a resole resin.

9. (Cancelled)

a3 10. (Currently amended) The composition of claim-7 2, wherein said crosslinking agent is comprises an amino resin having at least two alkoxymethyl groups.

11. (Original) The composition of claim 10, wherein said amino resin is selected from the group consisting of: an alkoxymethylated melamine resin, an alkoxymethylated benzoguanamine resin, an alkoxymethylated glycoluril, an alkoxymethylated polyacrylamid, an alkoxymethylated polymethacrylamid and a combination thereof.

a4 12. (Currently amended) The composition of claim-11 10, wherein said amino resin is an alkoxymethylated melamine resin having from about 2 to about 6 methoxymethyl groups.

13. (Original) The composition of claim 2, further comprising an isocyanate crosslinker having at least two isocyanate groups.

14. (Original) The composition of claim 1, wherein said acid generator is an ultraviolet, visible or infrared radiation or heat activated compound.

a5 15. (Currently amended) The composition of claim-14 1, ~~wherein said comprising~~ an acid generator is selected from the group consisting of: an onium salt, a covalently bound sulfonate group containing compound, hydrocarbysulfonamido-N-hydrocarbyl sulfonate and a combination thereof.

16. (Currently amended) The composition of claim-15 1, wherein said acid generator is comprises an onium salt.

17. (Original) The composition of claim 16, wherein said onium salt has a non-nucleophilic counteranion selected from the group consisting of: tetrafluoroborate, hexafluorophosphate, hexafluoroarsenate, hexafluoroantimonate, triflate,

09/933,864
Page 5

tetrakis(pentafluorophenyl)borate, pentafluoroethyl sulfonate, p-methylbenzene sulfonate, ethyl sulfonate, trifluoromethyl acetate and pentafluoroethyl acetate.

18. (Original) The composition of claim 16, wherein said onium salt is selected from the group consisting of: an iodonium salt, a sulfonium salt, a hydrocarbyloxysulfonium salt, a hydrocarbyloxyammonium salt, an aryl diazonium salt and a combination thereof.

96 19. (Currently amended) The composition of claim ~~18~~ 16, wherein said ~~hydrocarbyloxyammonium~~ onium salt is a salt of an N-hydrocarbyloxy substituted nitrogen containing heterocyclic compound.

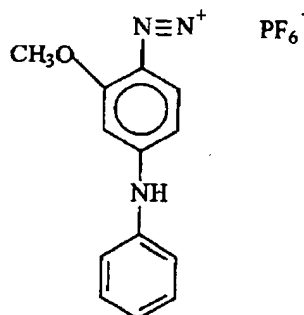
20. (Currently amended) The composition of claim ~~19~~ 16, wherein said ~~N-hydrocarbyloxy substituted nitrogen containing heterocyclic compound~~ onium salt is N-ethoxyisoquinolinium hexafluorophosphate.

21. (Currently amended) The composition of claim ~~18~~ 16, wherein said ~~iodonium~~ onium salt is 4-octyloxyphenyl phenyliodonium hexafluoroantimonate.

22. (Currently amended) The composition of claim ~~18~~ 1, wherein said acid generator is a monomeric or oligomeric aromatic diazonium salt.

23. (Original) The composition of claim 22, wherein said diazonium salt is selected from the group consisting of:

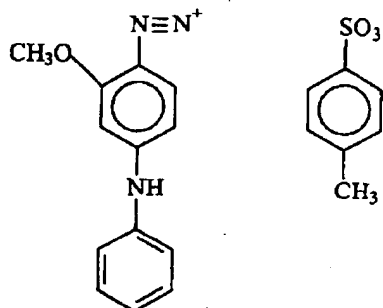
2-methoxy-4-phenylaminobenzene diazonium hexafluorophosphate (diazo MSPF6) represented by the formula:



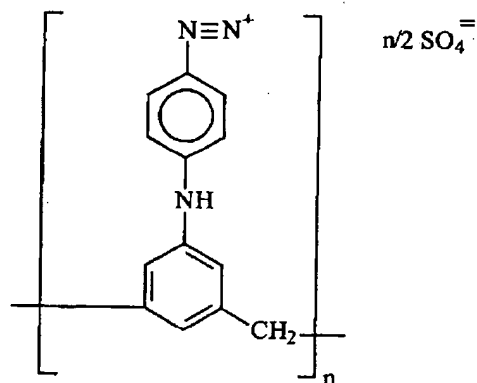
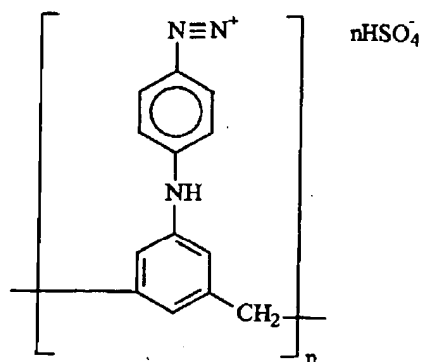
09/933,864

Page 6

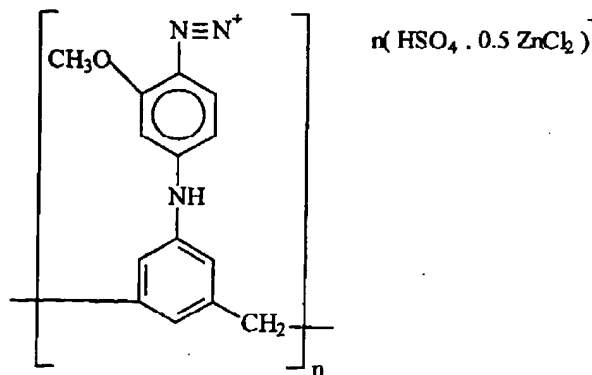
2-methoxy-4-phenylaminobenzenediazonium p-toluenesulfonate represented by the formula:



an oligomeric diazonium salt selected from the group consisting of compounds represented by the formula:



and

09/933,864
Page 7

wherein n is from 1 to 11; and a combination of any of the aforementioned compounds.

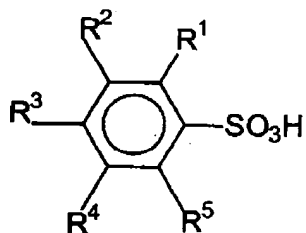
24. (Currently amended) The composition of claim 1, wherein said ~~strong~~ sulfonic acid is an acid having a pKa of not more than about 5.

25. (Currently amended) The composition of claim 1, wherein said ~~strong~~ sulfonic acid is an acid having a pKa of not more than about 4.

26. (Cancelled)

27. (Currently amended) The composition of claim-26_1, wherein R is selected from the group consisting of: linear, branched or cyclic alkyl of 1 to 22 carbon atom, linear, branched or cyclic haloalkyl of 1 to 22 carbon atom having at least one halogen and a mixture thereof.

28. (Currently amended) The composition of claim-26_1, wherein said sulfonic acid is an aryl sulfonic acid represented by the formula:



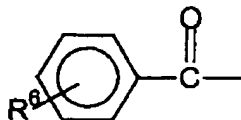
wherein each of R¹, R², R³, R⁴ and R⁵ is independently selected from the group consisting of: hydrogen, alkyl of 1 to 12 carbon atoms, haloalkyl of 1 to 22 carbon atoms having at

09/933,864

Page 8

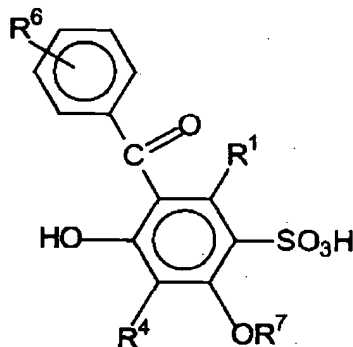
a8 least one halogen, aryl of 6 to 12 carbon atoms, halogen, hydroxy, alkoxy, cyano, nitro, alkoxycarbonyl and acyl.

29. (Original) The composition of claim 28, wherein said acyl is represented by the formula:



wherein R⁶ is selected from the group consisting of: hydrogen, alkyl of 1 to 12 carbon atoms, haloalkyl of 1 to 12 carbon atoms having at least one halogen, alkoxy, cyano, nitro, alkoxycarbonyl and acetyl.

30. (Currently amended) The composition of claim 28 1, wherein said ~~aryl~~-sulfonic acid is represented by the formula:



a9 wherein each of R¹, R⁴ and R⁶ is independently selected from the group consisting of: hydrogen, alkyl of 1 to 12 carbon atoms, haloalkyl of 1 to 12 carbon atoms having at least one halogen, aryl of 6 to 12 carbon atoms, halogen, hydroxy, alkoxy, cyano, nitro, alkoxycarbonyl and acyl and wherein R⁷ is selected from the group consisting of: hydrogen, alkyl of 1 to 12 carbon atoms, haloalkyl of 1 to 12 carbon atoms having at least one halogen, aryl of 6 to 12 carbon atoms, alkoxycarbonyl and acyl.

31. (Currently amended) The composition of claim ~~30~~ 1, wherein said ~~aryl~~-sulfonic acid is 3-benzoyl-4-hydroxy-6-methoxybenzenesulfonic acid.

32. (Original) The composition of claim 1, further comprising a photothermal converter material.

09/933,864
Page 9

33. (Original) The composition of claim 1, further comprising an infrared absorber.
34. (Original) The composition of claim 33, wherein said infrared absorber is selected from the group consisting of: a pigment, a dye and a combination thereof.
35. (Cancelled) ✓
36. (Cancelled) ✓

37. (Currently amended) An imageable element comprising:

a substrate; and

an imageable composition coated on a surface of said substrate,

said composition comprising: an acid curable composition; an acid generator; and a strong-sulfonic acid represented by the formula $R-SO_3H$, wherein R is a substituted or unsubstituted hydrocarbyl of 1 to 22 carbon atoms, or a substituted or unsubstituted aryl of 6 to 22 carbon atoms.

38. (Currently amended) The imageable element of claim 37, wherein said ~~thermally~~ imageable composition ~~further~~ comprises an infrared absorber.

39. (Currently amended) The imageable element of claim 37, wherein said ~~thermally~~ imageable composition comprises a photothermal converting material.

40. (Currently amended) A method of producing an imaged element comprising the steps of:

providing a thermally imageable element comprising a substrate and a thermally imageable composition coated on a surface of said substrate, said composition comprising an acid curable composition, an acid generator and a strong-sulfonic acid represented by the formula $R-SO_3H$, wherein R is a substituted or unsubstituted hydrocarbyl of 1 to 22 carbon atoms, or a substituted or unsubstituted aryl of 6 to 22 carbon atoms;

imagewise exposing said imageable element to heat with a hot stylus to produce an imagewise exposed element having exposed and unexposed regions;

baking said imagewise exposed element at a temperature and period of time

09/933,864
Page 10

sufficient to produce a cured element; and
contacting said cured element and a developer to remove the unexposed regions
and thereby produce said imaged element.

41. (Currently amended) A method of producing an imaged element comprising the steps of:
providing an imageable element comprising a substrate and an imageable
composition coated on a surface of said substrate, said composition comprising an acid
curable composition, an acid generator, ~~and a strong acid,~~ and an infrared absorber or
photothermal converter;

imagewise exposing said imageable element to radiation to produce an imagewise
exposed element having exposed and unexposed regions;

baking said imagewise exposed element at a temperature and period of time
sufficient to produce a cured element; and

contacting said cured element and a developer to remove the unexposed regions
and thereby produce said imaged element.

42. (Currently amended) The method of claim 41, wherein said ~~thermally~~-imageable
composition ~~further~~-comprises an infrared absorber.

43. (Currently amended) The method of claim 41, wherein said ~~thermally~~-imageable
composition ~~further~~-comprises a photothermal converter.

44. (Original) The method of claim 41, wherein said exposing step is carried out using an
infrared laser.

45. (New) The imageable element of claim 37, wherein the substrate is an aluminum sheet.

46. (New) The method of claim 41, wherein the acid curable composition comprises:
a crosslinkable binder; and
a crosslinking agent for said binder.

47. (New) The method of claim 46, wherein said binder comprises a novolak resin.

09/933,864
Page 11

48. (New) The method of claim 46, wherein said crosslinking agent comprises a resole resin.
49. (New) The method of claim 41, wherein said strong acid is an acid having a pKa of not more than about 5.
50. (New) The method of claim 41, wherein said strong acid is an acid having a pKa of not more than about 4.
51. (New) The method of claim 41, wherein said strong acid is a sulfonic acid.
52. (New) The method of claim 41, wherein said strong acid is a sulfonic acid represented by the formula $R-SO_3H$, wherein R is a substituted or unsubstituted hydrocarbyl of 1 to 22 carbon atoms, or a substituted or unsubstituted aryl of 6 to 22 carbon atoms.
53. (New) An imageable composition comprising:
 an acid curable composition;
 an acid generator;
 a strong acid; and
 an infrared absorber or photothermal converter.
54. (New) The composition of claim 53, wherein said acid curable composition comprises:
 a crosslinkable binder; and
 a crosslinking agent for said binder.
55. (New) The composition of claim 54, wherein said binder comprises a novolak resin.
56. (New) The composition of claim 54, wherein said crosslinking agent comprises a resole resin.
57. (New) The composition of claim 53, wherein said strong acid is an acid having a pKa of not more than about 5.
58. (New) The composition of claim 53, wherein said strong acid is an acid having a pKa of not more than about 4.

09/933,864

Page 12

all

59. (New) An imageable element comprising:

a substrate; and

an imageable composition coated on a surface of said substrate,

said composition comprising: an acid curable composition; an acid generator; a strong acid; and an infrared absorber or photothermal converter.

60. (New) The imageable element of claim 59, wherein the substrate is an aluminum sheet.

61. (New) An imageable composition comprising:

an acid curable composition;

an acid generator; and

a sulfonic acid having a pKa of not more than about 8.
